

**REMARKS**

By this Amendment, claims 1 and 15 are amended, and claims 10-13 and 22-25 are canceled. Accordingly, claims 1, 2, 4, 6-9 and 15-21 are pending in this application.

Reconsideration of the application is respectfully requested.

Applicants thank Examiner Alanko for the courtesy extended to Applicants' representative, Mr. Luo, during the April 7, 2005 personal interview. The substance of the personal interview is incorporated in the following remarks.

The Office Action rejects claims 1, 2, 4, 9-13, 15-17 and 21-25 under 35 U.S.C. §103(a) over U.S. Patent No. 5,747,857 to Eda et al. in view of U.S. Patent No. 6,300,676 to Kawai; rejects claims 1, 2, 4, 6-13 and 15-25 under 35 U.S.C. §103(a) over Eda et al. in view of Kawai and U.S. Patent No. 5,882,465 to McReynolds; rejects claims 1, 2, 4, 9-13, 15-17 and 21-25 under 35 U.S.C. §103(a) over Eda et al. in view of Kawai and U.S. Patent No. 6,106,735 to Kurle et al.; and rejects claims 1, 2, 4, 6-13 and 15-25 under 35 U.S.C. §103(a) over Eda et al. in view of Kawai, McReynolds and Kurle et al. These rejections are moot with respect to canceled claims 10-13 and 22-25, and are respectfully traversed with respect to the remaining claims.

The Office Action acknowledges that Eda et al. does not disclose, teach or suggest forming holes in a composite wafer after formation of the composite wafer. However, the Office Action asserts that Kawai discloses this feature. Applicants respectfully submit that the combination of Eda et al. and Kawai does not teach or suggest separating individual bulk acoustic resonator devices by sawing the composite wafer after the holes are filled with metal, as recited in claims 1 and 15.

Eda et al. discloses devices having pre-formed holes. See col. 41, lines 64-66. However, as acknowledged in the Office Action, Eda et al. does not disclose, teach or suggest forming holes in a composite wafer after formation of the composite wafer, and filling the holes with metal. Thus, Eda et al. does not disclose, teach or suggest separating individual

bulk acoustic resonator devices by sawing the composite wafer after the holes are filled with metal, as recited in claims 1 and 15.

Kawai discloses depositing conductive film 22 on the internal wall surface of communicating hole 21. See Figs. 10 and 11, and col. 9, line 44-col. 10, line 14. However, the communicating hole 21 is formed in a structure that contains a single angular velocity detecting element 11. See Fig. 1 in col. 6, lines 44-65; see also Figs. 2-21. Kawai does not disclose, teach or suggest a composite wafer having more than one bulk acoustic resonator devices. Thus, Kawai does not disclose, teach or suggest separating individual bulk acoustic resonator devices. It follows that Kawai cannot reasonably be considered to teach or suggest separating individual bulk acoustic resonator devices after the holes are filled with metal. Hence, Kawai does not supply this subject matter lacking in Eda et al.

During the personal interview, Examiner Alanko agreed that Eda et al. and Kawai do not disclose separating individual bulk acoustic resonator devices by sawing the composite wafer after the holes are filled with metal, as recited in claims 1 and 15. However, Examiner Alanko argued that, in order to improve the efficiency of mass production, it would have been obvious to fill the holes with metal before the devices are separated. In particular, Examiner Alanko indicated that Eda appears to disclose separating the devices as final products. Thus, Examiner Alanko indicated that it might have been obvious to separate the final products after filling the holes with metal because one of ordinary skill in the art would not have filled the holes of a final product with metal. Applicants respectfully disagree.

First, Eda does not disclose or suggest that the devices, after being separated, are "final products." Secondly, a final product of one process may be an intermediate product in a subsequent process. For example, the alleged final product of Eda's process may be a building block of various apparatuses for a variety of customer needs. Thus, the alleged final product of Eda's process may be further processed in different subsequent processes. Therefore, Eda's

devices, after being separated, may still undergo further processing, such as getting holes filled with metal as alleged by the Office Action.

In view of the above, the asserted combination of Eda et al. and Kawai fails to disclose, teach or suggest separating individual bulk acoustic resonator devices by sawing the composite wafer after the holes are filled with metal, as recited in claims 1 and 15.

It is respectfully submitted that McReynolds and Kurle et al. also fail to supply the subject matter lacking in Eda et al. Therefore, it is respectfully submitted that claims 1 and 15 are patentably distinguishable over Eda et al., Kawai, McReynolds, Kurle et al. and any combination thereof. Claims 2, 4 and 6-9, which depend from claim 1, and claims 16-21, which depend from claim 15, are likewise patentably distinguishable over Eda et al., Kawai, McReynolds, Kurle and any combination thereof, at least for the reasons discussed above, as well as for the additional features they recite. Accordingly, withdrawal of the rejections of claims 1, 2, 4, 6-9 and 15-21 under 35 U.S.C. §103(a) is respectfully requested.


The Office Action rejects claims 1, 10-13, 15 and 22-25 under 35 U.S.C. §103(a) over Eda et al. This rejection is moot with respect to canceled claims 10-13 and 22-25, and is respectfully traversed with respect to claims 1 and 15.

As discussed above, the Office Action acknowledges that Eda et al. does not disclose, teach or suggest forming holes in a composite wafer after formation of the composite wafer, and filling the holes with metal, as recited in claims 1 and 15. Furthermore, as discussed above, Eda et al. does not disclose, teach or suggest separating individual bulk acoustic resonator devices by sawing the composite wafer after the holes are filled with metal, as recited in claims 1 and 15. Thus, Eda et al. cannot reasonably be considered to disclose, teach or suggest the subject matter recited in claims 1 and 15. Accordingly, withdrawal of this additional rejection of claims 1 and 15 under 35 U.S.C. §103(a) is respectfully requested.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1, 2, 4, 6-9 and 15-21 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



James A. Oliff  
Registration No. 27,075

Gang Luo  
Registration No. 50,559

JAO:GXL/sqb

Date: April 11, 2005

**OLIFF & BERRIDGE, PLC**  
**P.O. Box 19928**  
**Alexandria, Virginia 22320**  
**Telephone: (703) 836-6400**

<p><b>DEPOSIT ACCOUNT USE</b> <b>AUTHORIZATION</b> Please grant any extension necessary for entry; Charge any fee due to our Deposit Account No. 15-0461</p>
--